

## **APPENDIX G**

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Independent Verification Contractor Letters

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## **APPENDIX G**

### **INDEPENDENT VERIFICATION CONTRACTOR LETTERS**

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Oak Ridge National Laboratory was the independent verification contractor (IVC) for the remedial work in Building 14. Following remediation of an area within the building, post-remedial verification surveys were performed by the remedial subcontractor. The IVC then performed surveys and/or reviewed the verification data and issued a letter releasing the area for use without radiological restrictions. If elevated readings (above generic guidelines or site-specific criteria) were found by the IVC, then additional decontamination work was performed before a release letter was issued. The purpose of these letters was to facilitate the restoration activities of each area following remediation. The IVC will issue a comprehensive report of their work in Building 14 at a later date.

This appendix contains two summary tables and copies of the IVC letters. Table G-1 is a chronological summary of the IVC letters. Table G-2 cross references each surface within each area to the IVC letter in which it is released. The IVC letters are then included as Attachment G-1.

## Appendix G Independent Verification Contractor Letters

**Table G-1**  
**Chronological Summary of IVC Letters**

<b>Date Issued<sup>1</sup></b>	<b>PDCC No.<sup>2</sup></b>	<b>Area Surveyed</b>	<b>Comments and Exceptions</b>
12/30/96	149356	Area 20A East	Entire area released (surfaces). In addition, specifically releases subsurface soil under the excavated trench.
		Areas 20B, 20B-1, and 20C	Entire area released (surfaces).
5/5/97	129-G0A-GAM-00018	2nd floor	Entire 2nd floor released.
		Areas 8, 10, and 11	All above ground surfaces released. No subsurface investigations conducted.
		Area 12	All surfaces above 1 foot of wall/floor interface, except one “hot spot” on the lower horizontal surface of the uppermost horizontal I-beam. A ledge that runs along the west wall had several areas in excess of guidelines, but it was to be demolished along with the floor.
		Area 13	All surfaces above the 1-foot floor/wall interface were released, except for an I-beam along the west wall which has hot spots on the lower horizontal surface closest to the wall.
7/30/97	129-L0A-GEV-00002	Above ground tank	Metal surfaces only are released. Tank is located near Building 31 and is known as the “HF Tank”.
		Areas 12 and 13	All remaining floor areas and excavated areas are released except for a strip of soil in Area 13 (this soil was subsequently remediated). Notes that a hazard assessment is being prepared for the soil underneath the walls and remaining floor areas.
10/27/97	129-G0A-GEV-00003	Area 2, 3, 4	All areas released.
		Hallway areas	Areas released, but the letter does not specify which hallways. Assumed to included both the Small Hallway and Large Hallway.
		1st Floor offices	All areas released except 8A and 9A-D.
		Men’s and women’s restrooms	All areas released.
		Corridor	All areas released.

## Appendix G Independent Verification Contractor Letters

**Table G-1 (Continued)**  
**Chronological Summary of IVC Letters**

Date Issued <sup>1</sup>	PDCC No. <sup>2</sup>	Area Surveyed	Comments and Exceptions
<i>10/27/97 Letter Continued:</i>			
		Areas 8, 10, and 11	Subsurface released.
12/22/97	129-G0A-GET-0004	Area 15	All interior surfaces and the subsurface are released with the exception of the surface beneath the large experimental tank adjacent to the pit on the south side.
		Areas 15A, 15B, 15B-1	All interior surfaces and subsurfaces are released.
1/30/98	129-G0A-GAM-00045	Area 14N	All surfaces above 6 inches from the floor/wall interface are released except for cross members associated with the crane rail.
		Area 14SW	Accessible areas 6 inches above the floor/wall interface up to approximately 12 feet along the south and west walls are released.
		Area 20A West	Entire area released.
		Process Piping	All piping investigated is released.
3/16/98	L0A-GPV-00019	Area 14N	Releases the floor and subsurfaces with the exception of portions of soils located underneath walls and the knee wall areas, which will be covered by supplemental standards. This closes out Area 14N.
		Area 14SW	Accessible areas 6 inches from the floor/wall interface up to approximately 12 feet along the south and west walls are released. Also releases the floor and subsurfaces with the exception of portions of soils located underneath walls and the knee wall areas, which will be covered by supplemental standards.
5/20/98	129-T0A-GEV-00015	Area 14SW	All areas except the ceiling and locations to be covered by supplemental standards are released. Includes walls above 12 feet from floor.
		Area 12 Stairwell	The entrance stairway leading down to the utility tunnel adjacent to Area 12 is released. Additional decontamination was performed prior to the release.

## Appendix G Independent Verification Contractor Letters

**Table G-1 (Continued)**  
**Chronological Summary of IVC Letters**

<b>Date Issued<sup>1</sup></b>	<b>PDCC No.<sup>2</sup></b>	<b>Area Surveyed</b>	<b>Comments and Exceptions</b>
6/10/98	129-T0A-GEV-00017	Area 14SE	The area is released with the exception of an area along the wall which leads to Area 15. This area will be remediated in the future. Walls, piping, and part of the overheads were surveyed.
		Area 14SW	The ceiling is released.
		Area 9	The ceiling and overheads are released.
7/7/98	129-L0A-GEV-00009	Areas 12, 14, 15	Letter clarifies/updates the status of Building 14 independent verification. Areas that have been released to date include first and second floor offices, Areas 2, 3, 4, 8, 10, 11, 13, 20A, 20A East, 20B, 20B-1, 20C, 21, the Corridor, and stairways. The letter notes that Areas 12 and 14 have residual contamination in soils beneath the west wall. The area beneath the large experimental tank in Area 15 was inaccessible and was not surveyed. Certain metal surfaces in Area 14 overheads (the lower horizontal surfaces close to the wall in Area 14SW) were inaccessible to remedial equipment.
9/16/98	129-L0A-GEV-00011	Area 9	In Area 9 the walls and floor were scanned and soil samples collected. The letter releases the walls and floor, but soil sample data was not available at the time the letter was issued. The letter notes that supplemental limits will be applied to a pipe within the subsurface.
		Area 14SE	Surveys of the ceiling, subsurface soil, and floor in Area 14SE were performed. The letter releases the ceiling and remaining concrete floor in Area 14SE but not the soil since the analytical results of the soil samples collected by the IVC were not available at that time.
9/21/98	129-L0A-GEV-00012	Area 12 Stairwell	The letter states that the walls, steps, ceiling, and pipes associated with the Area 12 stairwell were surveyed and are below surface criteria. It also states that the internal piping was cleared during the process piping investigations. The subsurface is not covered under this letter.
		Area 14SE	An area on the wall between Area 14SE and Area 15 is released.
		Area 21	The letter states that Area 21 has been decontaminated and falls below the DOE guidelines for soil contamination as outlined in DOE Order 5400.5.
10/23/98	14501-129-G0A-GAM-00049	Area 9	Letter releases all subsurface soil in Area 9 following review of sample analytical results.

Appendix G Independent Verification Contractor Letters

**Table G-1 (Continued)**  
**Chronological Summary of IVC Letters**

<b>Date Issued<sup>1</sup></b>	<b>PDCC No.<sup>2</sup></b>	<b>Area Surveyed</b>	<b>Comments and Exceptions</b>
		Area 14	Letter releases all subsurface soil in Area 14 following review of sample analytical results.
		Area 14SE	Letter releases the ceiling in Area 14SE.
		Area 12 Stairwell	All surfaces (walls, stairs, floor, ceiling, and electrical conduits) associated with the stairwell leading to the utility tunnel have been verified as falling below the DOE surface guidelines. This reiterates the letter of 9/21/98 but adds the caveat that the drain lines and sump are not released pending remedial action surveys of these features. In a discussion with the IVC, two points were clarified. First, the sump had been remediated long before the 9/21/98 letter and is assumed to be covered by that letter. Second, no remedial action is planned for the drainlines.
11/10/98	14501-129-G0A-GAM-00051	Area 12 Stairwell Sump and Drainlines	Letter releases all surfaces of the sump located in the utility tunnel stairwell and the east and west drainlines leading into the sump. The letter notes that the north drainline exceeds guidelines and that further action will be necessary to resolve this portion of the pipe.

Note:

<sup>1</sup> Date listed is the date on the IVC letter.

<sup>2</sup> PDCC (Project Document Control Center) Number is the number assigned to letter by Bechtel National, Inc.

## Appendix G Independent Verification Contractor Letters

**Table G-2**  
**Cross-Reference of Areas and IVC Letters**

Area	Surface	Letter (date issued)	Comments
2, 3, and 4	Entire Area	10/27/97	Entire area released.
Small Hallway	Entire Area	10/27/97	Entire area released.
Large Hallway	Entire Area	10/27/97	Entire area released.
1st Floor Offices	Entire Area	10/27/97	Entire area released. The letter notes Areas 8A and 9A-9D as an exception, but these offices are included in Area 9 and will be released along with that area.
	Men's and Women's Restrooms	10/27/97	All areas releases.
2nd Floor	Entire Area	5/5/97	Entire area released.
8, 10 and 11	Walls, Ceiling	5/5/97	All above-ground surfaces released.
	Subsurface	10/27/97	Subsurfaces of these areas are released.
Corridor	Entire Area	10/27/97	Entire area released.
9	Ceiling and Overheads	6/10/98	The ceiling and overheads are released.
	Walls	9/16/98	The walls in Area 9 were scanned and released after the removal of additional contaminated material.
	Subsurface	9/16/98	Letter notes that a pipe in the subsurface will be included in the request for supplemental standards. The letter does not address the remainder of the subsurface.
	Floors	9/16/98	Letter releases the floor for Area 9.
	Subsurface	10/23/98	Letter releases the subsurface soil of Area 9.
12	Walls, Ceiling	5/5/97	All surfaces above the 1 foot floor/wall interface released, except one "hot spot" on the lower horizontal surface of the uppermost horizontal I-beam. A ledge along the west wall, which had several areas in excess of guidelines, was to be demolished along with the floor.
	Floor and Subsurface	7/30/97	All remaining floor areas and excavated areas are released except for a strip of soil in Area 13 (this soil was subsequently remediated). Notes that a hazard assessment is being prepared for the soil underneath the walls and remaining floor areas.

## Appendix G Independent Verification Contractor Letters

**Table G-2 (Continued)**  
**Cross-Reference of Areas and IVC Letters**

Area	Surface	Letter (date issued)	Comments
	Area 12 Stairwell	5/20/98	The entrance stairway leading down to the utility tunnel adjacent to Area 12 is released. Additional decontamination was performed prior to the release.
	Area 12 Stairwell	9/21/98	The letter releases the walls, steps, ceiling, and pipes associated with the stairwell which leads to the utility tunnel. The letter notes that the internal piping was previously covered under the process piping investigations and also that the subsurface is not covered by this letter.
	Area 12 Stairwell	10/23/98	The letter reiterates the points made in the 9/21/98 letter.
	Area 12 Stairwell Sump and Drainlines	11/10/98	The letter releases all surfaces of the sump. It also releases the east and west drainlines but not the north drainlines. It notes that further action will be necessary to resolve the issue of this pipe.
13	Walls, Ceiling	5/5/97	All surfaces above the 1 foot floor/wall interface, except for the I-beam along the west wall which has hot spots on the lower horizontal surface closest to the wall.
	Floor and Subsurface	7/30/97	All remaining floor areas and excavated areas are released except for a strip of soil in Area 13 (this soil was subsequently remediated). Notes that a hazard assessment is being prepared for the soil underneath the walls and remaining floor areas.
14N	Walls, Ceiling	1/30/98	All surfaces above 6 inches from the floor/wall interface are released except for cross members associated with the crane rail.
	Floor and Subsurface	3/16/98	Releases the floor and subsurfaces with the exception of portions of soils located underneath walls and the knee wall areas, which will be covered by supplemental standards. This closes out Area 14N.
14SE	Walls, Piping, Overheads	6/10/98	The area is released with the exception of an area along the wall that leads to Area 15. This area will be remediated in the future. Walls, piping, and part of the overheads were surveyed.
	Remaining overheads	9/16/98	The remaining overheads, not included in the 6/10/98 letter, are released in this letter.



## Appendix G Independent Verification Contractor Letters

**Table G-2 (Continued)**  
**Cross-Reference of Areas and IVC Letters**

Area	Surface	Letter (date issued)	Comments
	North Wall	9/21/98	The wall between Area 14SE and Area 15 is released.
	Floor	9/21/98	The floor, including the walls up to 1 foot above the floor, is released.
	Subsurface soil	10/23/98	This letter releases the subsurface soil.
	Ceiling	10/23/98	This letter releases the entire ceiling and all overheads and is intended to include specifically those locations excepted in the 6/10/98 letter.
14SW	South and West Walls	1/30/98	Accessible areas 6 inches above the floor/wall interface up to approximately 12 feet, along the south and west walls are released.
	Walls, Floor, Subsurface	3/16/98	The area is released with the exception of overheads and walls above 12 feet. Also releases the floor and subsurfaces with the exception of portions of soils located underneath walls and the knee wall areas, which will be covered by supplemental standards.
	Entire Area	5/20/98	All areas except the ceiling and locations to be covered by supplemental standards are released. Includes walls above 12 feet from floor.
	Ceiling	6/10/98	The ceiling is released.
15	Entire Area	12/22/97	For Area 15, all interior surfaces and the subsurface are released with the exception of the surface beneath the large experimental tank adjacent to the pit on the south side.  For Areas 15A, 15B, and 15B-1, all interior surfaces and subsurfaces are released.
20A West	Entire Area	1/30/98	Entire area released.
20A East	Entire Area	12/30/96	Releases entire area (surfaces). In addition, specifically releases subsurface soil under the excavated trench.
20B, 20B-1, 20C	Entire Area	12/30/96	Releases entire area (surfaces).
Process Piping	Entire Area	1/30/98	Entire piping area surveyed is released.
21	Entire Area	9/21/98	Letter releases entire area.

## **ATTACHMENT G-1**

### **COPIES OF INDEPENDENT VERIFICATION CONTRACTOR LETTERS**

**OAK RIDGE NATIONAL LABORATORY**  
MANAGED BY LOCKHEED MARTIN ENERGY RESEARCH CORPORATION  
FOR THE U.S. DEPARTMENT OF ENERGY

POST OFFICE BOX 2008  
OAK RIDGE, TN 37831

December 30, 1996

Dr. W. Alexander Williams  
Designation and Certification Manager  
Office of Eastern Area Programs  
Cloverleaf Building, (EM-421)  
Department of Energy  
19901 Germantown Road  
Germantown, Maryland 20874-1290

Dear Dr. Williams:

**Contract DE-AC05-96OR22464, Verification Surveys Conducted at Former Linde Site**

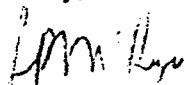
In October 1996 personnel from the Oak Ridge National Laboratory conducted verification surveys at the former Linde site in Tonawanda, New York. A request was made for Oak Ridge National Laboratory to verify several areas in Building 14. All areas surveyed met Department of Energy cleanup criterion.

We have released Areas 20A East, 20B, 20B-1, and 20C as being below Department of Energy surface guidelines (see map). Additionally, areas in 20A East, where the concrete floor was removed, met approved Department of Energy guidelines for uranium soil contamination in the state of New York. A total of seven samples were taken from this area. However, we have not verified any other subsurfaces at the former Linde site.

Overall this particular project went quite well. The remediation contractor and technical support personnel worked together and did a good job of characterizing the areas and removing the contamination before the Oak Ridge National Laboratory verification team arrived.

If you have any questions please contact me at (423) 576-4108.

Sincerely,

  
S. P. McKenzie  
Measurement Applications  
and Development Group

SPM:lec

Enclosure(s): Former Linde Site Building 14

c: R. D. Foley  
M. E. Murray  
L. L. Baldy (BNI)  
Rc-File

**OAK RIDGE NATIONAL LABORATORY**  
MANAGED BY LOCKHEED MARTIN ENERGY RESEARCH CORPORATION  
FOR THE U.S. DEPARTMENT OF ENERGY

POST OFFICE BOX 2008  
OAK RIDGE, TN 37831-6420

PHONE: (423) 576-4108  
FAX: (423) 241-5683  
INTERNET: SP5@ornl.gov.

May 5, 1997

Dr. W. Alexander Williams  
Designation and Certification Manager  
Office of Eastern Area Programs  
Cloverleaf Building, EM-421  
Department of Energy  
19901 Germantown Road  
Germantown, Maryland 20874-1290

Dear Dr. Williams:


**Contract DE-AC05-96OR22464, Verification of Building 14, Praxair Site**

As a result of meeting with the Bechtel National, Incorporated, New York team, and IDM Environmental Corporation (the Turnkey Subcontractor for Building 14), we have chosen this form of communicating the results of our verification surveys in this building. This assists both Bechtel and IDM Environmental Corporation in their planning. Therefore, you will be receiving a series of letters clearing the areas that pass our Independent Verification surveys. During the week of April 14, an Independent Verification Contractor survey was conducted in certain areas in this building. The results are as follows:

1. We have declared the second floor as being below Department of Energy guidelines.
2. All above ground surfaces in areas 8, 10, and 11, are also released. No subsurface investigations have been conducted.
3. All surfaces above ~1 foot of the wall/floor interface in area 12 were also released as below guidelines, with the exception of one "hot spot" on the lower horizontal surface, on the uppermost horizontal I-beam. Both Bechtel and IDM Environmental Corporation was made aware of this area and pending clean-up and survey of this area by Safety and Ecology Corporation, we would be willing to release this area. According to IDM Environmental Corporation the ledge that runs along the west wall and will be demolished with the floor (several areas above guidelines were found during a preliminary scan of the ledge).
4. Finally, in area 13, all surfaces above ~1 foot of the floor/wall interface were declared below guidelines with the exception of an I-beam that runs along the west wall. Hot spots were found along the beam on the lower horizontal surface closest to the wall. This area will need further decontamination.

Please call S. P. McKenzie (423) 576-4108, if additional information is needed.

Sincerely,



Samuel P. McKenzie  
Measurement Applications  
and Development Group

SPM

c: S. K. Amrit, BNI  
R. D. Foley

**OAK RIDGE NATIONAL LABORATORY**  
IMAGED BY LOCKHEED MARTIN ENERGY RESEARCH CORPORATION  
THE U.S. DEPARTMENT OF ENERGY

POST OFFICE BOX 2008  
OAK RIDGE, TN 37831-6420

PHONE: (423) 576-4108  
FAX: (423) 241-5683  
INTERNET: SP5@ornl.gov.

July 30, 1997

Dr. W. Alexander Williams  
Designation and Certification Manager  
Office of Eastern Area Programs  
Cloverleaf Building, (EM-421)  
Department of Energy  
19901 Germantown Road  
Germantown, Maryland 20874-1290

Dear Dr. Williams:

**Status of Cleanup of Former Linde Site in Tonawanda, New York**

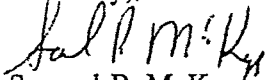
This is the second letter in a series of updates concerning the status of the cleanup of the former Linde Site in Tonawanda, New York. We have chosen this method of notification to expedite the remediation process. Although the areas in building 14 were not initially prepared for our survey, we were able to complete our activities during this survey trip. Full reports will be prepared for each building after they are completed.

During the week of July 14, 1997, an Independent Verification Contractor (IVC) was conducted on certain areas in building 14, and the exterior of building 31. In addition, a verification survey was conducted on an above-ground tank near the former site of building 38. The results are as follows:

- We have verified the above-ground tank (metal surfaces only) as being below Department of Energy surface guidelines.
- The exterior of building 31 (exterior walls and roof) was also verified as not exceeding Department of Energy guidelines, with the exception of the area behind the transformer, as identified by Bechtel's radiological support subcontractor. The entire building is now verified, excluding the subsurface areas in and around the structure.
- The subsurface and remaining floor areas 12 and 13, of building 14, were thoroughly investigated and our results align fairly well with those from the turnkey subcontractor. A tentative hazard assessment on the soil underneath both the walls and remaining floor areas is being prepared. This assessment also includes the footer surfaces that were in the process of being remediated until the structural integrity came into question. Our verification survey was therefore limited to the areas not covered in the scope of the hazard assessment (i.e., the open excavated areas and the remaining floor surfaces). With the exception of a strip of soil in area 13 (which was subsequently remediated), all excavated areas are below Department of Energy soil guidelines for the state of New York. We also collected data on the areas to be included in the assessment so that we may be able to assist in the process.

If you have any questions or need additional information please call (423) 576-4108.

Sincerely,

  
Samuel P. McKenzie  
Measurement Applications  
and Development Group

SPM:lec

c: S. K. Armit, BNI

R. D. Foley

File-RC

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**OAK RIDGE NATIONAL LABORATORY**  
MANAGED BY LOCKHEED MARTIN ENERGY RESEARCH CORPORATION  
OF THE U.S. DEPARTMENT OF ENERGY

POST OFFICE BOX 2008  
OAK RIDGE, TN 37831

October 27, 1997

Dr. W. Alexander Williams  
Designation and Certification Manager  
Office of Eastern Area Programs  
Cloverleaf Building, EM-421  
Department of Energy  
19901 Germantown Road  
Germantown, Maryland 20874-1290

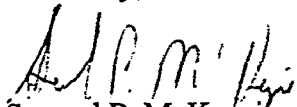
Dear Dr. Williams:

**Contract DE-AC05-96OR22464, Independent Verification Survey on Building 14**

During the week of September 15, an Independent Verification Survey was conducted on certain areas in Building 14, and a review of Post Remedial Action Data taken from the previously contaminated section on the exterior of Building 31. The results are as follows:

- Building 31 (all interior and exterior surfaces), with the exception of the subsurface, has been determined to be below Department of Energy clean-up guidelines.
- In Building 14 we have designated Areas 2, 3, 4, the hallway areas, all first floor offices (with the exception of 8A and 9A-D), and the Men's and Women's rest rooms as being below Department of Energy criterion.
- The corridor that separates Areas 10 and 11 from Area 12 was surveyed on a previous date, and is below Department of Energy clean-up criterion.
- We have reviewed the core sample results taken from Areas 8, 10, and 11, and conclude that the subsurface of these areas are below Department of Energy guidelines.

Sincerely,



Samuel P. McKenzie  
Measurement Applications  
and Develop Group

SPM:lec

c: S. Armit, BNI  
R. D. Foley  
File-RC

**OAK RIDGE NATIONAL LABORATORY**  
MANAGED BY LOCKHEED MARTIN ENERGY RESEARCH CORPORATION  
FOR THE U.S. DEPARTMENT OF ENERGY

POST OFFICE BOX 2008  
OAK RIDGE, TN 37831

December 22, 1997

Mr. Tim Byrnes  
CELRB-PP-PM  
Army Corps of Engineers  
1776 Niagara Street  
Buffalo, New York 14207

Dear Mr. Byrnes:

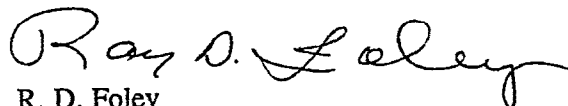
**Radiological Verification Surveys on Building 14**

During the week of November 10, 1997, an Independent Verification Contractor (IVC) team from Oak Ridge National Laboratory, conducted radiological verification surveys on certain areas in building 14. The results are as follows:

1. Area 15 (all interior surfaces and the subsurface), with the exception of the surface beneath the large experimental tank, adjacent to the pit on the south side of the area, has been determined to be below remedial action guidelines.
2. Areas 15A, 15B, and 15B-1 (all interior surfaces and subsurfaces), has been determined to be below remedial action guidelines.

If you have any questions or need further assistance please call me at (423) 576-7584.

Sincerely,



R. D. Foley  
Measurement Applications  
and Development Group

RER:lec

c: S. Armit, BNI  
S. P. McKenzie  
R. E. Rodriguez  
File - RC

rec'd  
2/10/98

**OAK RIDGE NATIONAL LABORATORY**  
MANAGED BY LOCKHEED MARTIN ENERGY RESEARCH CORPORATION  
FOR THE U.S. DEPARTMENT OF ENERGY

POST OFFICE BOX 2008  
OAK RIDGE, TENNESSEE 37831

January 30, 1998

Mr. Tim Byrnes  
CELRB-PP-PM  
Army Corps of Engineers  
1776 Niagara Street  
Buffalo, New York 14207

Dear Mr. Byrnes:

**Independent Verification Survey of Praxair Building 14**

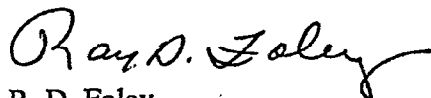
During the week of January 12 an Independent Verification Survey was conducted on two areas in Building 14. Also, a review of the "Summary Report for the Process Piping Radiological Investigation Praxair Building 14," has been completed by the independent verification contractor. The results are as follows:

- Area 14 North, with the exception of the cross members associated with the crane rail, all surfaces above six inches from floor/wall interface have been determined to be below the clean-up guidelines as defined in the Department of Energy Order 5400 (wall surfaces to six inches from the floor will be remediated as part of the floor).
- Area 14 Southwest, accessible areas six inches from floor/wall interface up to approximately twelve feet along the south and west walls have also been determined to be below Department of Energy guidelines.
- Area 20A West was determined to be below Department of Energy Order 5400.5 guidelines via a review of data collected by the turnkey subcontractor.

We concur with the results of the summary of the process piping investigation in Building 14 and release this area as below Department of Energy clean up criterion for this site.

If you need additional information please contact me at (423) 576-7584.

Sincerely,



R. D. Foley  
Measurement Applications  
and Development Group

RDF:lec

c: S. P. McKenzie  
M. E. Murray  
R. E. Rodriguez



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**OAK RIDGE NATIONAL LABORATORY**

MANAGED BY LOCKHEED MARTIN ENERGY RESEARCH CORPORATION  
FOR THE U.S. DEPARTMENT OF ENERGY

POST OFFICE BOX 2008  
OAK RIDGE, TENNESSEE 37831

March 16, 1998

Mr. R. J. Gibbs  
Bechtel National, Incorporated  
151 Lafayette Drive  
Post Office Box 350  
Oak Ridge, Tennessee 37831-0350

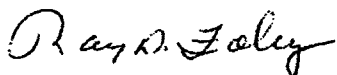
Dear Mr. Gibbs:

**Independent Verification Survey for Building 14**

During the week of March 2, 1998, an Independent Verification Survey (IVS) was conducted on the subsurface soils and bottom portions of the walls in area 14N and 14SW in Building 14.

The subsurface and remaining floor areas in 14N and 14SW were thoroughly investigated and our results align well with those of the subcontractor. Tentative supplemental standards for portions of the soil underneath both the walls and knee wall areas, are being developed. With the exception of the locations to be covered by supplemental standards, areas 14N and 14SW are verified not to have residual contamination above the guidelines, as defined in the Department of Energy (DOE) Order 5400.5. This closes out area 14N as the other portions were covered in a previous letter. Area 14SW has been verified to be below DOE guidelines with the exception of the overhangs and walls above twelve feet. Cleanup activities on these surfaces will be conducted at a later date. I have attached two tables summarizing the radiological cleanup guidelines for unrestricted use as outlined in DOE Order 5400.5. If you have any questions call (423) 576-7584.

Sincerely,



R. D. Foley  
Measurement Applications  
and Development Group

RDF:lec

Attachment: Table 1; Table 2

c: S. P. McKenzie  
M. E. Murray  
R. Pilon, ACE  
File-RC

**OAK RIDGE NATIONAL LABORATORY**  
MANAGED BY LOCKHEED MARTIN ENERGY RESEARCH CORPORATION  
FOR THE U.S. DEPARTMENT OF ENERGY

POST OFFICE BOX 2008  
OAK RIDGE, TENNESSEE 37831

May 20, 1998

Mr. Robert J. Gibbs  
Bechtel National, Incorporated  
151 Lafayette Drive  
Post Office Box 350  
Oak Ridge, Tennessee 37831-0350

Dear Mr. Gibbs:

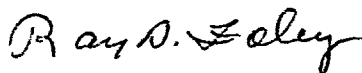
**Contract DE-AC05-96OR22464, Building 14 Independent Verification Survey**

An independent verification (IV) survey was conducted on walls and overhead structures in area 14SW, Building 14, during the week of May 4, 1998. This area of investigation was approximately twelve feet above the floor (all areas below this level were released earlier). This report does not cover the ceiling of the area. An additional area was surveyed, which was a stairway leading to the underground utility tunnels, adjacent to area 12.

The walls, piping, and other structures were thoroughly investigated and our results align well with those of the subcontractor. Tentative supplemental standards for portions of the lower horizontal I-beam surface, that is closest to the south wall, are being developed. With the exception of the ceiling and locations to be covered by supplemental standards, area 14SW is verified not to have residual contamination above the guidelines as defined in Department of Energy (DOE) Order 5400.5. The entrance stairway leading down to the utility tunnel, adjacent to area 12 was also surveyed and contamination above guidelines was detected. This elevated area was reported and additional decontamination was conducted. After additional decontamination the area was verified to be below the DOE order. The enclosed table summarizes the radiological clean-up guidelines for unrestricted use as outlined in DOE Order 5400.5.

If you have questions or need further information please call (423) 576-7584.

Sincerely,



R. D. Foley  
Measurement Applications  
and Development Group

RDF:lec

Enclosures 1

c: S. P. McKenzie  
M. E. Murray  
R. E. Rodriguez  
File-RC

**OAK RIDGE NATIONAL LABORATORY**  
MANAGED BY LOCKHEED MARTIN ENERGY RESEARCH CORPORATION  
FOR THE U.S. DEPARTMENT OF ENERGY

POST OFFICE BOX 2008  
OAK RIDGE, TENNESSEE 37831

June 10, 1998

Mr. Tim Byrnes  
CELRB-PP-PM  
U. S. Army Corps of Engineers  
1776 Niagara Street  
Buffalo, New York 14207

Dear Mr. Byrnes:

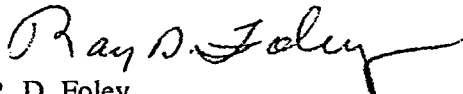
**Contract DE-AC05-96OR22464, Independent Verification Survey on Building 14**

During the week of June 1, 1998, an Independent Verification (IV) survey was conducted on the walls and certain overhead structures in areas 14SE, Building 14. This area of investigation began approximately one foot above the floor. Additionally, the overheads in area 9 were surveyed, as well as the ceiling in area 14SW.

The walls, piping, and part of the overhead structures in area 14SE were surveyed. This area is verified not to have residual contamination above guidelines defined in the Department of Energy (DOE) Order 5400.5. The exception is an area along the wall that leads to area 15. This area will be renovated and post remedial surveys will be conducted. The ceiling in area 14SW and the overheads and ceilings in area 9 were surveyed and both areas were verified to be below DOE guidelines. Enclosed is a table summarizing the radiological cleanup guidelines for unrestricted use as defined in DOE Order 5400.5.

If you have any questions or need additional information call (423) 576-7584.

Sincerely,



R. D. Foley  
Measurement Applications  
and Development Group

RDF

Enclosures 1

c/enc: R. J. Gibbs, BNI  
S. P. McKenzie  
R. Pilon, USACE  
File-RC

**OAK RIDGE NATIONAL LABORATORY**  
MANAGED BY LOCKHEED MARTIN ENERGY RESEARCH CORPORATION  
FOR THE U.S. DEPARTMENT OF ENERGY

POST OFFICE BOX 2008  
OAK RIDGE, TENNESSEE 37831

July 7, 1998

Mr. Robert J. Gibbs  
Bechtel National, Incorporated  
151 Lafayette Drive  
Post Office Box 350  
Oak Ridge, Tennessee 37831-0350

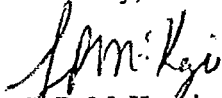
Dear Mr. Gibbs:

**Contract DE-AC05-96OR22464, Clarification Status of the Independent Verification of Building 14 Praxair Site**

This correspondence is intended to clarify/update the status of the Independent Verification of Building 14 at the Praxair site. There are several areas that have been declared below Department of Energy (DOE) Guidelines as defined in DOE Order 5400.5. Included are the first and second floor offices, areas 2, 3, 4, 8, 10, 11, 13, 20A, 20A east, 20B, 20B-1, 20C, 21, the corridor, and stairways.

Areas 12 and 14 all have residual contamination in the soils beneath the walls that run along the west wall. Area 15 contains an area beneath a large experimental tank that was inaccessible and could not be surveyed. In addition, difficult to access metal surfaces in the overhead areas of area 14 (lower horizontal surfaces close to wall in area 14SW) are above DOE clean-up criterion. Survey activities are continuing in area 9 and 14 SE, and subsequent letters will address these areas.

Sincerely,



S. P. McKenzie  
Measurement Applications  
and Development Group

SPM:lec

Enclosures

c: R. D. Foley  
M. E. Murray  
File-RC

**OAK RIDGE NATIONAL LABORATORY**  
MANAGED BY LOCKHEED MARTIN ENERGY RESEARCH CORPORATION  
FOR THE U.S. DEPARTMENT OF ENERGY

POST OFFICE BOX 2008  
OAK RIDGE, TENNESSEE 37831

September 16, 1998

Mr. R. J. Gibbs  
Bechtel National, Incorporated  
70 Pearce Avenue  
Tonawanda, New York 14150

Dear Mr. Gibbs:

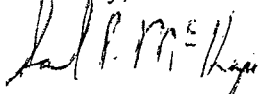
**Contract DE-AC05-96OR22464, Independent Verification Surveys of 9 Lab and 14SE of Building 14**

During the week of July 6-13, 1998, Independent Verification Surveys (IV) were conducted in areas 9 Lab and 14SE of Building 14. The ceiling, exposed subsurface soils, and remaining floor areas of area 14SE were investigated. This area of investigation includes approximately one foot of the bottom of the wall. In addition the subsurface soils, walls, and remaining concrete floor surfaces were surveyed in area 9 Lab.

The exposed soils in areas 9 Lab and 14SE were scanned and soil samples were collected. The remaining concrete floor surfaces were also surveyed. After further decontamination efforts, review of the post remedial action radiological data supplied by the subcontractor, and additional data collected from the remediated areas collected by the independent verification contractor, these areas are verified not to have residual contamination above the guidelines as defined in Department of Energy (DOE) Order 5400.5. Walls in area 9 Lab were also scanned and after removal of additional contaminated material this area has also been verified not to have contamination above DOE guidelines. There is a portion of the subsurface in area 9 Lab containing a pipe that will be included in the request for supplemental standards, as it is above clean-up criterion. This email is not a verification statement and should not be used as one, since our soil samples have not been analyzed.

If you have any questions or need further information please call (423) 576-4108.

Sincerely,



S. P. McKenzie  
Measurement Applications  
and Development Group

SPM:lec

c: R. D. Foley  
File-RC

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**OAK RIDGE NATIONAL LABORATORY**

MANAGED BY LOCKHEED MARTIN ENERGY RESEARCH CORPORATION  
FOR THE U.S. DEPARTMENT OF ENERGY

POST OFFICE BOX 2008  
OAK RIDGE, TENNESSEE 37831

September 21, 1998

Mr. R. J. Gibbs  
Bechtel National, Incorporated  
70 Pearch Avenue  
Tonawanda, New York 14150

Dear Mr. Gibbs:

**Contract DE-AC05-96OR22464, Clarification Status of the Independent Verification of Building 14, Praxair Site**

This correspondence is to clarify our standing regarding areas remediated but not covered under previously issued correspondence. Portions of these areas were either omitted from earlier reports or additional decontamination was required. Area 21, which at one time housed underground sumps, has been decontaminated and falls below Department of Energy (DOE) guidelines for soil contamination as outlined in DOE Order 5400.5. The area was at one time enclosed and fell within the scope of this effort. The walls, steps, ceiling, and pipes associated with the stairwell in area 12, that leads to the utility tunnel, was also surveyed and is below DOE guidelines for surface contamination. The internal piping was cleared during the process piping investigations. However, the subsurface is not covered under this letter. Survey data collected by the subcontractor at an area along the wall between areas 14SE and area 15, have been released as falling below the DOE surface guidelines.

If you have any questions or need additional information call (423) 576-4108.

Sincerely,



S. P. McKenzie  
Measurement Applications  
and Development Group

SPM:lec

c: R. D. Foley  
File-RC

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**OAK RIDGE NATIONAL LABORATORY**  
MANAGED BY LOCKHEED MARTIN ENERGY RESEARCH CORPORATION  
FOR THE U.S. DEPARTMENT OF ENERGY

POST OFFICE BOX 2008  
OAK RIDGE, TENNESSEE 37831

October 23, 1998

Mr. Ray Pilon  
CELRB-PP-PM  
U. S. Army Corps of Engineers  
1776 Niagara Street  
Buffalo, New York 14207

Dear Mr. Pilon:

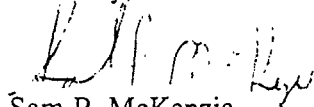
**Contract DE-AC05-96OR22464, Clarification of Verification Activities Associated With Building 14, Praxair Facility**

The purpose of this correspondence is to clarify any outstanding areas and misunderstood issues with respect to verification activities conducted in Building 14 at the Praxair facility. Initially, this type of correspondence served only as a vehicle to expedite the restoration/betterment activities that followed the remediation of parts of this building. They have never been intended as a final verification statement. A final, comprehensive verification report will be issued to cover all Oak Ridge National Laboratory (ORNL) activities in Building 14.

The ceiling in Area 14SE has been determined to fall below the surface guidelines as defined in Department of Energy (DOE) Order 5400.0. All soil samples have now been analyzed and the outstanding subsurface soils in Areas 9 and 14 fall below the site specific soil criterion of 60pCi/g total uranium. All surfaces (walls, stairs, floor, ceiling, and electrical conduits) associated with the stairwell leading to the utility tunnel in Area 12 have been verified as falling below the DOE surface guidelines. We are presently awaiting post remedial action surveys of the drain lines and sump location under the floor in this area.

If you have any questions or need more information please call (423) 576-4108.

Sincerely,



Sam P. McKenzie  
Measurement Applications  
and Development Group

SPM:lec

c: R. D. Foley  
R. J. Gibbs, BNI  
File-RC

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**OAK RIDGE NATIONAL LABORATORY**  
MANAGED BY LOCKHEED MARTIN ENERGY RESEARCH CORPORATION  
FOR THE U.S. DEPARTMENT OF ENERGY

POST OFFICE BOX 2008  
OAK RIDGE, TENNESSEE 37831

November 10, 1998

Mr. Ray Pilon  
CELRB-PP-PM  
U. S. Army Corps of Engineers  
1776 Niagara Street  
Buffalo, New York 14207

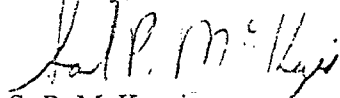
Dear Mr. Pilon:

**Contract No. DE-AC05-96OR22464, Radiological Data for Building 14 Praxair Site**

The purpose of this correspondence is to convey the results of our evaluation of radiological data, taken by the subcontractor for Building 14, at the Praxair site. We agree with their findings (attached), that the surfaces of the sump located in the utility tunnel section of area 12, as well as the east and west drain lines leading into the sump, fall below the Department of Energy (DOE) criterion for radiological surface cleanup. The north drain line however, does exceed guidelines and further action will be necessary to resolve this portion of pipe. The remedial action survey of this sump area had not been received until recently. This sump area also falls below the DOE criterion for surface cleanup, and will be addressed in our verification report to be released subsequently.

If you have any questions or need additional information please call (423) 576-4108.

Sincerely,



S. P. McKenzie  
Measurement Applications  
and Development Group

SPM:lec

Attachment

c: R. D. Foley  
M. E. Murray  
File-RC